

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was **not** written for publication in a law journal and (2) is **not** binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID C. HEIDENREICH
and KEITH A. NICHOLS

Appeal No. 1999-2327
Application No. 08/168,235

ON BRIEF

Before COHEN, ABRAMS, and GONZALES, Administrative Patent Judges.

COHEN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1, 5 through 13, and 16 through 19. These claims constitute all of the claims remaining in the application.

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Appellants' disclosed invention pertains to a torque limiting clutch and output shaft assembly. A basic understanding of the invention can be derived from a reading of exemplary claim 1, a copy of which appears in the APPENDIX to the brief (Paper No. 15).¹

As evidence of obviousness, the examiner has applied the documents listed below:

Entrup 1984	4,445,876	May 1,
Heidenreich et al. 1991 (Heidenreich '517)	5,002,517	Mar. 26,
Kohler et al. 1992 (Kohler)	5,119,995	Jun. 9,
Heidenreich et al. 1994 (Heidenreich '909)	5,295,909	Mar. 22, (filed May 1, 1992)

The following rejection is before us for review.

¹ In claim 1, line 18 after "said output hub" (first occurrence) apparently a --,-- has been omitted. This informality should be taken care of during any further prosecution before the examiner.

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Claims 1, 5 through 13, and 16 through 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Heidenreich '517 in view of Heidenreich '909, Entrup, and Kohler.

The full text of the examiner's rejection and response to the argument presented by appellants appears in the answer (Paper No. 16), while the complete statement of appellants' argument can be found in the brief (Paper No. 15).

OPINION

In reaching our conclusion on the obviousness issue raised in this appeal, this panel of the board has carefully considered appellants' specification and claims, the applied teachings,² and the respective viewpoints of appellants and

² In our evaluation of the applied prior art, we have considered all of the disclosure of each document for what it would have fairly taught one of ordinary skill in the art. See In re Boe, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966). Additionally, this panel of the board has taken into account not only the specific teachings, but also the inferences which one skilled in the art would reasonably have
(continued...)

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the examiner. As a consequence of our review, we make the determinations which follow.

We reverse the examiner's rejection of appellants' claims under 35 U.S.C. § 103.

Independent claim 1 is drawn to a torque limiting clutch and output shaft assembly, comprising, inter alia, an output hub and output shaft interengaged by an interference fit, the output hub having splines for engaging friction discs and a plurality of bores for receiving bolts, with the splines and threaded bores being in registration with each other.

Independent claim 13 specifies a torque limiting clutch and output shaft assembly comprising, inter alia, first and second plates, friction discs, separator discs, pressure plate and spring means comprising a first unit, an output hub received upon an output shaft and comprising a second unit, wherein the second unit is selectively engageable and disengageable from

²(...continued)
been expected to draw from the disclosure. See In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

the first unit, the second unit having splines and bolt holes, with the splines and bolt holes being in registration with each other. Independent claim 19 sets forth a torque limiting clutch and output shaft assembly comprising, inter alia, an output hub received upon an output shaft by an interference fit, the output hub having splines and threaded bores, and wherein one of the threaded bores and a valley of one of said splines are collinear on a line that intersects with a center point of the output hub.

Having assessed the collective teachings of the applied Heidenreich '517, Heidenreich '909, Entrup, and Kohler documents, this panel of the board concludes that the evidence before us does not support a conclusion of obviousness as to the claimed subject matter, as more specifically explained below.³

³ As to the interference fit feature of claims 1 and 19, it is our opinion that the disclosure of Heidenreich '517 considered together with the reasonably pertinent teaching of Kohler would have been suggestive to one having ordinary skill in the art of the combination of a key and thermally induced interference fit between the output shaft and output hub in the torque limiter of Heidenreich '517 (Fig. 3). Relative to
(continued...)

We focus our attention upon the respective registration and collinear features of independent claims 1, 13, and 19. It is quite apparent to us that the totality of the evidence of obviousness applied by the examiner lacks any suggestion thereof whatsoever.

As explained in the answer (pages 4 through 6), the examiner considers the noted features a matter of design choice, since alignment methods are indicated to be notoriously old. Appellants, on the other hand, have specifically argued that the collinear alignment and registration features are nowhere shown or suggested by the applied prior art references. (brief, pages 5 and 6).

³(...continued)
the feature of the second unit being selectively engageable and disengageable from the first unit, as set forth in claim 13, contrary to the view of the examiner (answer, pages 6 and 7), the Heidenreich '517 teaching would not have been suggestive thereof. It appears to us that seal 114 of Heidenreich '517 would prevent removal of the second unit through the end plate 94 of the first unit, and the end plate 90 of the first unit would have to be disassembled therefrom to permit the second unit to be removed in the direction of the input hub 72.

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Simply stated, the examiner has not supported the rejection with appropriate prior art evidence as a basis for a conclusion that the application of alignment and registration features to a torque limiting clutch and output shaft assembly would have been obvious. For that reason alone, the rejection must be reversed.

In summary, this panel of the board has reversed the rejection of claims 1, 5 through 13, and 16 through 19 under 35 U.S.C. § 103 as being unpatentable over Heidenreich '517 in view of Heidenreich '909, Entrup, and Kohler.

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The decision of the examiner is reversed.

REVERSED

IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
NEAL E. ABRAMS)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
)	
JOHN F. GONZALES)	
Administrative Patent Judge)	

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